30/10/24

LAB 5

Q) Develop a java program to create a class Bank that maintains two kinds of account - savings and current. Savings account provides compound interest and withdrawal facilities but no cheque book facility. Current account provides cheque book facility but no interest. Current account holders should also maintain a minimum balance and if the balance falls below this level, a service charge is imposed.

```
import java.util.Scanner;
import java.lang.Math;
class Bank {
    int accountNo;
    double balance;
    Bank (int accountNo) {
        this.accountno = accountno;
        this.balance = 0;
    }
  Void deposit (double depAmount) {
     this.balance += depAmount;
  }
  Void withdraw (double withAmount) {
     this.balance -= withamount;
  }
  double interest (double rate, int time) {
   System.out.println ("Interest is not applicable
   in current amount account");
   return 0.0; }}
```

```
class SavingsAccount extends Bank {
    SavingsAccount (int accountNo) {
        super (accountno);
}
double interest (double rate, int time) {
    double interest = (balance * Math.pow ((1 +
        (rate/100)), time)) - balance;
        balance += interest;
        return interest; }
}
class CurrentAccount extends Bank {
    static double withdrawalLimit = 1000;
    CurrentAccount (int accountNo) {
        super (accountno);
}
    public void withdraw (double withAmount) {
        super.balance -= withAmount;
        if (balance < withdrawLimit) {
            System.out.println ("Withdraw limit reached
            - Deducting service charge");
            balance -= 100; }
    }
}
class Rem {
    public static void main (String [] args) {
    System.out.println
    double amount;
    Scanner sc = new Scanner (System.in);
    System.out.println ("1. Open savings acc \n 2.
    Open current acc \n Enter choice");
```

```
int choice = SC.nextInt();
Bank acc;
if (choice == 1) {
        acc = new SavingsAccount (101); }
else {
        acc = new CurrentAccount (201); }
System.out.println(1. Deposit \n 2. Withdraw 3. Show
 balance \n 4. Compute interest \n 5. Exit);
while (true) {
 System.out.print("Enter choice");
 choice = SC.nextInt();
 switch (choice){
   case 1: System.out.print("Enter deposit amt")
           amount = sc.nextDouble();
           acc.Deposit(amount);
           break;
   case 2: System.out.print("Withdraw amount")
           amount = SC.nextDouble();
           acc.withdraw(amount);
           break;
   case 3: System.out.println("Balance: + acc.balance);
           break;
   case 4: System.out.println("Interest : acc.interest(5,1));
           break;
   default : System.exit(0); }
  }
 }
}
```

Output

1) Open Savings Account
2) Open Current Account

Enter choice : 1
~~Enter deposit amount : 5000~~
~~Enter choice :~~
1) Deposit
2) Withdrawal
3) Show balance
4) Compute interest
5) Exit

Enter choice : 1
Enter deposit amout : 5000
Enter choice : 2
Enter withdraw amout : 1000
Enter choice : 3
Balance is 4000.0
~~Enter choice : 4~~
~~Interest is 200.0~~

Seen
20/11/24